12-1166

HOBBS OCD
JAN 13 2014
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OCD Hobbs

Form 3160-3
(March 2012)

FORM APPROVED
OMB No. 1004-0137
Expires October 31, 2014

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No. NM118722

6. If Indian, Allotee or Tribe Name

1a. Type of work: ☑ DRILL ☐ REENTER

7. If Unit or CA Agreement, Name and No.

1b. Type of Well: ☑ Oil Well ☐ Gas Well ☐ Other ☐ Single Zone ☐ Multiple Zone

8. Lease Name and Well No. Fuggles 24 Federal Com 1H <40327>

2. Name of Operator Cimarex ~~Energency Co. of Colorado~~ Energy Co <215099>

9. API Well No. 30-025 - 41596

3a. Address 600 N. Marienfeld, Ste 600 Midland TX 79701

3b. Phone No. (include area code) 432-571-7800

10. Field and Pool, or Exploratory LOWER BS WC-025 G-08 S253235G; <97903>

4. Location of Well (Report location clearly and in accordance with any State requirements.*)

At surface 330 FNL & 380 FWL

At proposed prod. zone 330 FSL & 380 FWL Horizontal Bone Spring test

11. Sec., T. R. M. or Blk. and Survey or Area 24-25S-32E

14. Distance in miles and direction from nearest town or post office* Approx.26 miles West from Jal, NM

12. County or Parish Lea

13. State NM

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drlg. unit line, if any)	16. No. of acres in lease	17. Spacing Unit dedicated to this well
330	~~320~~ 2760.84	160
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	**19. Proposed Depth**	**20. BLM/BIA Bond No. on file**
N/A	MD 15295; TVD 10918	NM2575; NMB000835
21. Elevations (Show whether DF, KDB, RT, GL, etc.)	**22. Approximate date work will start***	**23. Estimated duration**
3447' GR	05/15/2013	30-35 Days

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No.1, must be attached to this form:

1. Well plat certified by a registered surveyor.
2. A Drilling Plan.
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office).
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification
6. Such other site specific information and/or plans as may be required by the BLM.

25. Signature	Name (Printed/Typed)	Date
Tracie J Cherry	Tracie J Cherry	09/26/2012

Title: Sr. Regulatory Analyst

Approved by (Signature) /s/ STEPHEN J. CAFFEY	Name (Printed/Typed)	Date JAN - 6 2014
Title FIELD MANAGER	Office CARLSBAD FIELD OFFICE	

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.
Conditions of approval, if any, are attached.

APPROVAL FOR TWO YEARS

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Continued on page 2)

*(Instructions on page 2)

Approval Subject to General Requirements & Special Stipulations Attached

Carlsbad Controlled Water Basin

01/14/14

SEE ATTACHED FOR CONDITIONS OF APPROVAL

JAN 15 2014

Drilling Plan
Fuggles 24 Federal Com 1H
Cimarex Energy Co. of Colorado
Unit D, Section 24
T25S-R32E; Lea County, NM

In response to questions asked under Section II B of Bulletin NTL-6, the following information is provided for your consideration:

1 **Location:** SHL 330 FNL & 380 FWL
BHL 330 FSL & 380 FWL

2 **Elevation above sea level:** 3447 GR

3 **Geologic name of surface formation:** Quaternary Alluvium Deposits

4 **Drilling tools and associated equipment:** Conventional rotary drilling rig using fluid as a circulating medium for solids removal.

5 **Proposed drilling depth:** MD 15295 TVD 10918

6 **Estimated tops of geological markers:**

Water per OSE	235	
Rustler	766	
T. Salt	998	
B. Salt	4552	
Delaware	4756	Hydrocarbons
Cherry Canyon	5827	
Brushy Canyon	7699	
Bone Spring	8908	Hydrocarbons
1st BSS	9940	
2nd BSS	10437	

7 **Possible mineral bearing formations:**
Shown above

8 **Proposed Mud Circulating System:**

Depth	Mud Wt	Visc	Fluid Loss	Type Mud
0' to ~~840'~~ 870'	8.4 - 8.6	28	NC	FW
~~840'~~ to 4736'	10.0	30-32	NC	Brine water
4736' to 15295'	8.6-8.8	28-32	NC	FW/KCL

See COA

Sufficient mud materials will be kept on location at all times in order to combat lost circulation or unexpected kicks. In order to run DSTs, open hole logs, and casing, the viscosity and water loss may have to be adjusted in order to meet these needs.

Proposed Drilling Plan
After setting surface & intermediate csg, drill 8 3/4" or 7 7/8" hole to KOP @ 10400, log and kick off. Drill through the curve to lateral TD @ 15295' MD, 10918' TVD. Run 5-1/2" csg to TD per program.

Drilling Plan
Fuggles 24 Federal Com 1H
Cimarex Energy Co. of Colorado
Unit D, Section 24
T25S-R32E; Lea County, NM

9 Casing & Cementing Program: See COA

String	Hole Size	Depth			Casing OD		Weight	Collar	Grade
Surface	17 1/2"	0'	to	840' 870'	New	13 3/8"	48#	STC	H-40
Intermediate	12 1/4"	0'	to	3400'	New	9 5/8"	36#	LTC	J-55
Intermediate	12 1/4"	3400'	to	4736'	New	9 5/8"	36#	LTC	J-55
Production	8 3/4" or 7 7/8"	0'	to	10400'	New	5 1/2"	17#	LTC	P-110
Production	8 3/4" or 7 7/8"	10400'	to	15295'	New	5 1/2"	17#	BTC	P-110

10 Cementing:

Surface Lead: 390 sx Class C + Bentonite + Calcium Chloride + LCM – mw 13.5 ppg yield 1.75
Tail: 194 sx Class C + LCM – mw 14.8 ppg yield 1.34
Excess 72% **TOC Surface** **Centralizers per Onshorder 2.III.B.1.f** Onshore Order

Intermediate Lead: 1131 sx 35:65 (poz/C) + Salt + Bentonite + LCM + retarder – mw 12.9 ppg yield 1.88
Tail: 277 sx Class C + retarder + LCM – mw 14.8 ppg yield 1.32
Excess 82% **TOC Surface**

~~Intermediate~~ Production Lead: 505 sx 35:65 (poz/H) + salt + Sodium Metasilicate + Bentonite + Fluid Loss + Dispersant + LCM + Retarder - MW 11.9 ppg yield 2.4
Tail: 942 sx Class C + retarder + LCM – mw 14.8 ppg yield 1.32
Excess 25% **TOC 4200'** **Centralizers every 3rd joint through the curve or legal location hardline to provide adequate cement coverage every 100' unless hole conditions require greater spacing between centralizers.**

Cement volumes will be adjusted depending on hole size.

Collapse Factor	*Burst Factor*	*Tension Factor*
1.125	1.125	1.6

11 Pressure control Equipment:
Exhibit "E". A 13⅝" 5000 psi working pressure BOP system consisting of one set of blind rams and one set of pipe rams and a 5000# annular type preventer. A choke manifold and 120 gallon accumulator with floor and remote operating stations and auxiliary power system. Rotating head as needed. A kelly cock will be installed and maintained in operable condition and a drill string safety valve in the open position will be available on the rig floor. Mud gas seperator will be installed before drilling out of surface casing.

See COA BOP unit will be hydraulically operated. BOP will be installed and operated at least once a day while drilling and the blind rams will be operated when out of hole during trips. No abnormal pressure or temperature is expected while drilling. From the base of the 13⅝" casing through the running of production casing, the well will be equipped with a 5000 psi BOP system.

BOPs will be tested by an independent service company to 250 psi low and 5000 psi high on the surface casing and 250 psi low and 5000 psi high on the intermediate. Hydril will be tested to 250 psi low and 2500 psi high on the surface and intermediate casings.

See COA Cimarex Energy Co. of Colorado requests a variance to use a co-flex line between the BOP and choke manifold. Certification for proposed co-flex hose is attached. The hose is not required by the manufacturer to be anchored. In the event the specific hose is not available, one of equal or higher rating will be used.

Drilling Plan
Fuggles 24 Federal Com 1H
Cimarex Energy Co. of Colorado
Unit D, Section 24
T25S-R32E; Lea County, NM

12 Testing, Logging and Coring Program:

A. Mud logging program: 2 man unit from 4736' to TD
B. Electric logging program: CNL / LDT / CAL / GR, DLL / CAL / GR Surface to TD
C. No DSTs or cores are planned at this time.

13 Potential Hazards:

No abnormal pressures or temperatures are expected. In accordance with Onshore Order 6, Cimarex does not anticipate that there will be enough H_2S from the surface to the Bone Spring formations to meet the BLM's minimum requirements for the submission of an "H_2S Drilling Operation Plan" or "Public Protection Plan" for the drilling and completion of this well. Since we have an H_2S Safety package on all wells, attached is an "H_2S Drilling Operations Plan." Adequate flare lines will be installed off the mud / gas separator where gas may be flared safely. All personnel will be familiar with all aspects of safe operation of equipment being used.

See COA

Estimated BHP **4913** Estimated BHT **140°**

14 Road and location construction will begin after BLM approval of APD. Anticipated spud date as soon as approved.
Drilling expected to take 30-35 days
If production casing is run an additional 30 days will be required to complete and construct surface facilities.

15 Other Facets of Operations:

After running casing, cased hole gamma ray neutron collar logs will be run from total depth over possible pay intervals.
Bone Spring pay will be perforated and stimulated.
The proposed well will be tested and potentialed as **an oil well.**

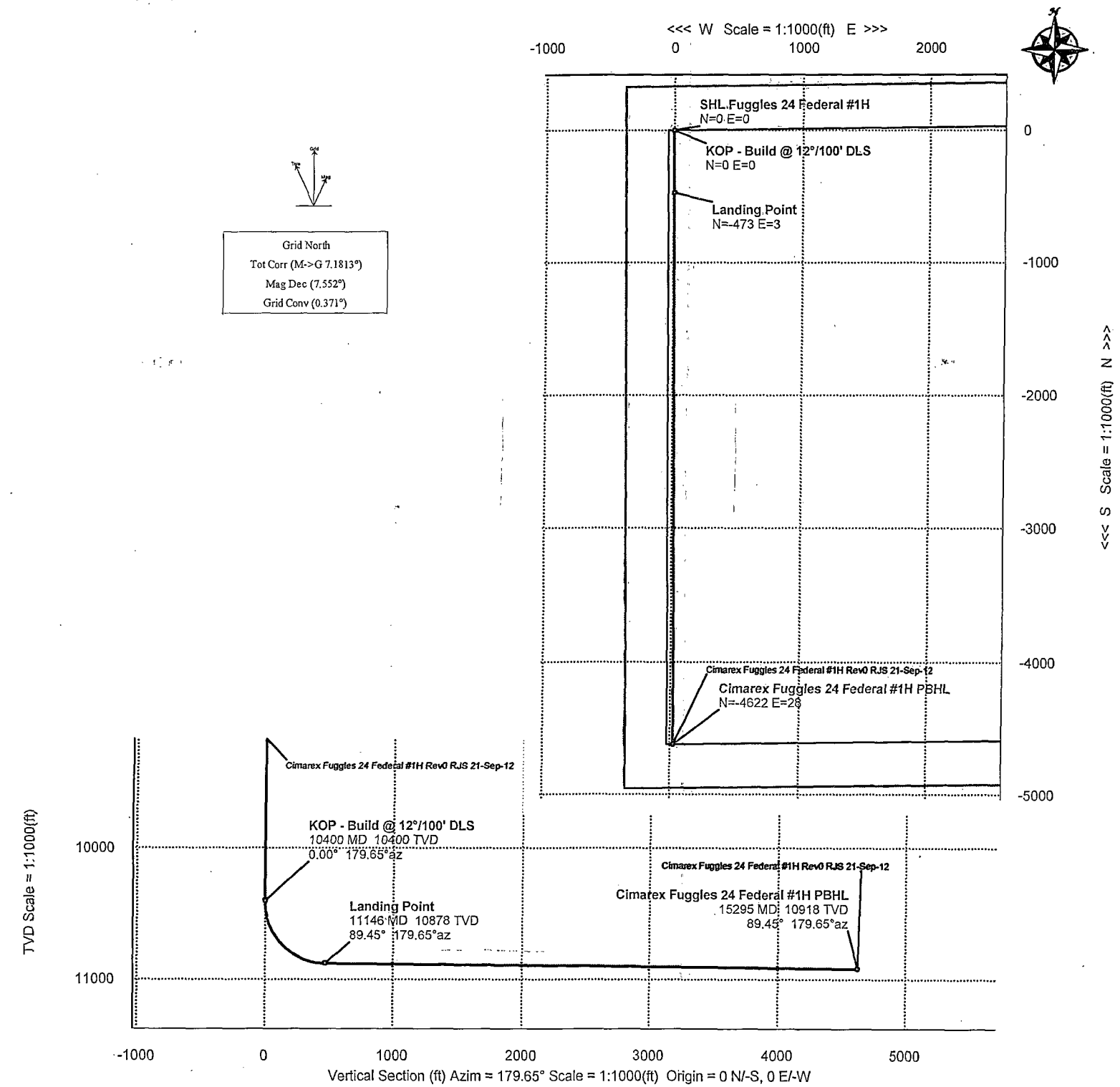
Cimarex

PATHFINDER
A Schlumberger Company

WELL	FIELD	STRUCTURE
Fuggles 24 Federal #1H	NM Lea County	TBD

Magnetic Parameters				Surface Location				Miscellaneous			
Model: BGGM 2012	Dip: 60.010°	Date: September 21, 2012		Lat: N 32 7 20.537	Northing: 408953.70 ftUS	Grid Conv: 0.371°		Slot: Fuggles 24 Federal #1H	TVD Ref: Ground Level(3447ft above MSL)		
	Mag Dec: 7.552°	FS: 48410.6nT		Lon: W 103 38 8.970	Easting: 757271.40 ftUS	Scale Fact: 0.99996249		Plan: Rev0 RJS 21-Sep-12	Srvy Date: September 21, 2012		

NAD83 New Mexico State Plane, Eastern Zone, US Feet



Critical Points

Critical Point	MD	INCL	AZIM	TVD	VSEC	N(+) / S(-)	E(+) / W(-)	DLS
SHL Fuggles 24 Federal #1H	0.00	0.00	179.65	0.00	0.00	0.00	0.00	
KOP - Build @ 12°/100' DLS	10400.00	0.00	179.65	10400.00	0.00	0.00	0.00	0.00
Landing Point	11146.29	89.45	179.65	10878.00	473.43	-473.42	2.87	11.99
Cimarex Fuggles 24 Federal #1H PBHL	15295.31	89.45	179.65	10918.00	4622.27	-4622.18	28.00	0.00

Cimarex Fuggles 24 Federal #1H Rev0 RJS 21-Sep-12 Proposal Report 100' Interpolated

(Non-Def Plan)

Report Date:	September 21, 2012 - 10:12 AM	**Survey / DLS Computation:**	Minimum Curvature / Lubinski
Client:	Cimarex	**Vertical Section Azimuth:**	179.653 ° (Grid North)
Field:	NM Lea County (NAD 83)	**Vertical Section Origin:**	0.000 ft, 0.000 ft
Structure / Slot:	TBD / Cimarex Fuggles 24 Federal #1H	**TVD Reference Datum:**	Ground Level
Well:	Cimarex Fuggles 24 Federal #1H	**TVD Reference Elevation:**	3447.000 ft above MSL
Borehole:	Original Borehole	**Seabed / Ground Elevation:**	3447.000 ft above MSL
UWI / API#:	Unknown / Unknown	**Magnetic Declination:**	7.552 °
Survey Name:	Cimarex Fuggles 24 Federal #1H Rev0 RJS 21-Sep-12	**Total Gravity Field Strength:**	999.1522 mgn (9.8 based)
Survey Date:	September 21, 2012	**Total Magnetic Field Strength:**	48410.559 nT
Tort / AHD / DDI / ERD Ratio:	89.455 ° / 4622.267 ft / 5.763 / 0.423	**Magnetic Dip Angle:**	60.010 °
Coordinate Reference System:	NAD83 New Mexico State Plane, Eastern Zone, US Feet	**Declination Date:**	September 21, 2012
Location Lat / Long:	N 32° 7' 20.53724", W 103° 38' 8.97036"	**Magnetic Declination Model:**	BGGM 2012
Location Grid N/E Y/X:	N 408953.700 ftUS, E 757271.400 ftUS	**North Reference:**	Grid North
CRS Grid Convergence Angle:	0.3709 °	**Grid Convergence Used:**	0.3709 °
Grid Scale Factor:	0.99996249	**Total Corr Mag North->Grid North:**	7.1813 °
		Local Coord Referenced To:	Structure Reference Point

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")	Closure (ft)	Closure Azimuth (°)	DLS (°/100ft)
SHL Fuggles 24 Federal #1H	0.00	0.00	179.65	0.00	0.00	0.00	0.00	408953.70	757271.40	N 32 7 20.54	W 103 38 8.97	0.00	0.00	N/A
	100.00	0.00	179.65	100.00	0.00	0.00	0.00	408953.70	757271.40	N 32 7 20.54	W 103 38 8.97	0.00	0.00	0.00
	200.00	0.00	179.65	200.00	0.00	0.00	0.00	408953.70	757271.40	N 32 7 20.54	W 103 38 8.97	0.00	0.00	0.00
	300.00	0.00	179.65	300.00	0.00	0.00	0.00	408953.70	757271.40	N 32 7 20.54	W 103 38 8.97	0.00	0.00	0.00
	400.00	0.00	179.65	400.00	0.00	0.00	0.00	408953.70	757271.40	N 32 7 20.54	W 103 38 8.97	0.00	0.00	0.00
	500.00	0.00	179.65	500.00	0.00	0.00	0.00	408953.70	757271.40	N 32 7 20.54	W 103 38 8.97	0.00	0.00	0.00
	600.00	0.00	179.65	600.00	0.00	0.00	0.00	408953.70	757271.40	N 32 7 20.54	W 103 38 8.97	0.00	0.00	0.00
	700.00	0.00	179.65	700.00	0.00	0.00	0.00	408953.70	757271.40	N 32 7 20.54	W 103 38 8.97	0.00	0.00	0.00
	800.00	0.00	179.65	800.00	0.00	0.00	0.00	408953.70	757271.40	N 32 7 20.54	W 103 38 8.97	0.00	0.00	0.00
	900.00	0.00	179.65	900.00	0.00	0.00	0.00	408953.70	757271.40	N 32 7 20.54	W 103 38 8.97	0.00	0.00	0.00
	1000.00	0.00	179.65	1000.00	0.00	0.00	0.00	408953.70	757271.40	N 32 7 20.54	W 103 38 8.97	0.00	0.00	0.00
	1100.00	0.00	179.65	1100.00	0.00	0.00	0.00	408953.70	757271.40	N 32 7 20.54	W 103 38 8.97	0.00	0.00	0.00
	1200.00	0.00	179.65	1200.00	0.00	0.00	0.00	408953.70	757271.40	N 32 7 20.54	W 103 38 8.97	0.00	0.00	0.00
	1300.00	0.00	179.65	1300.00	0.00	0.00	0.00	408953.70	757271.40	N 32 7 20.54	W 103 38 8.97	0.00	0.00	0.00
	1400.00	0.00	179.65	1400.00	0.00	0.00	0.00	408953.70	757271.40	N 32 7 20.54	W 103 38 8.97	0.00	0.00	0.00
	1500.00	0.00	179.65	1500.00	0.00	0.00	0.00	408953.70	757271.40	N 32 7 20.54	W 103 38 8.97	0.00	0.00	0.00
	1600.00	0.00	179.65	1600.00	0.00	0.00	0.00	408953.70	757271.40	N 32 7 20.54	W 103 38 8.97	0.00	0.00	0.00
	1700.00	0.00	179.65	1700.00	0.00	0.00	0.00	408953.70	757271.40	N 32 7 20.54	W 103 38 8.97	0.00	0.00	0.00
	1800.00	0.00	179.65	1800.00	0.00	0.00	0.00	408953.70	757271.40	N 32 7 20.54	W 103 38 8.97	0.00	0.00	0.00
	1900.00	0.00	179.65	1900.00	0.00	0.00	0.00	408953.70	757271.40	N 32 7 20.54	W 103 38 8.97	0.00	0.00	0.00
	2000.00	0.00	179.65	2000.00	0.00	0.00	0.00	408953.70	757271.40	N 32 7 20.54	W 103 38 8.97	0.00	0.00	0.00
	2100.00	0.00	179.65	2100.00	0.00	0.00	0.00	408953.70	757271.40	N 32 7 20.54	W 103 38 8.97	0.00	0.00	0.00
	2200.00	0.00	179.65	2200.00	0.00	0.00	0.00	408953.70	757271.40	N 32 7 20.54	W 103 38 8.97	0.00	0.00	0.00
	2300.00	0.00	179.65	2300.00	0.00	0.00	0.00	408953.70	757271.40	N 32 7 20.54	W 103 38 8.97	0.00	0.00	0.00
	2400.00	0.00	179.65	2400.00	0.00	0.00	0.00	408953.70	757271.40	N 32 7 20.54	W 103 38 8.97	0.00	0.00	0.00
	2500.00	0.00	179.65	2500.00	0.00	0.00	0.00	408953.70	757271.40	N 32 7 20.54	W 103 38 8.97	0.00	0.00	0.00
	2600.00	0.00	179.65	2600.00	0.00	0.00	0.00	408953.70	757271.40	N 32 7 20.54	W 103 38 8.97	0.00	0.00	0.00
	2700.00	0.00	179.65	2700.00	0.00	0.00	0.00	408953.70	757271.40	N 32 7 20.54	W 103 38 8.97	0.00	0.00	0.00
	2800.00	0.00	179.65	2800.00	0.00	0.00	0.00	408953.70	757271.40	N 32 7 20.54	W 103 38 8.97	0.00	0.00	0.00

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")	Closure (ft)	Closure Azimuth (°)	DLS (°/100ft)
	2900.00	0.00	179.65	2900.00	0.00	0.00	0.00	408953.70	757271.40	N 32 7 20.54	W 103 38 8.97	0.00	0.00	0.00
	3000.00	0.00	179.65	3000.00	0.00	0.00	0.00	408953.70	757271.40	N 32 7 20.54	W 103 38 8.97	0.00	0.00	0.00
	3100.00	0.00	179.65	3100.00	0.00	0.00	0.00	408953.70	757271.40	N 32 7 20.54	W 103 38 8.97	0.00	0.00	0.00
	3200.00	0.00	179.65	3200.00	0.00	0.00	0.00	408953.70	757271.40	N 32 7 20.54	W 103 38 8.97	0.00	0.00	0.00
	3300.00	0.00	179.65	3300.00	0.00	0.00	0.00	408953.70	757271.40	N 32 7 20.54	W 103 38 8.97	0.00	0.00	0.00
	3400.00	0.00	179.65	3400.00	0.00	0.00	0.00	408953.70	757271.40	N 32 7 20.54	W 103 38 8.97	0.00	0.00	0.00
	3500.00	0.00	179.65	3500.00	0.00	0.00	0.00	408953.70	757271.40	N 32 7 20.54	W 103 38 8.97	0.00	0.00	0.00
	3600.00	0.00	179.65	3600.00	0.00	0.00	0.00	408953.70	757271.40	N 32 7 20.54	W 103 38 8.97	0.00	0.00	0.00
	3700.00	0.00	179.65	3700.00	0.00	0.00	0.00	408953.70	757271.40	N 32 7 20.54	W 103 38 8.97	0.00	0.00	0.00
	3800.00	0.00	179.65	3800.00	0.00	0.00	0.00	408953.70	757271.40	N 32 7 20.54	W 103 38 8.97	0.00	0.00	0.00
	3900.00	0.00	179.65	3900.00	0.00	0.00	0.00	408953.70	757271.40	N 32 7 20.54	W 103 38 8.97	0.00	0.00	0.00
	4000.00	0.00	179.65	4000.00	0.00	0.00	0.00	408953.70	757271.40	N 32 7 20.54	W 103 38 8.97	0.00	0.00	0.00
	4100.00	0.00	179.65	4100.00	0.00	0.00	0.00	408953.70	757271.40	N 32 7 20.54	W 103 38 8.97	0.00	0.00	0.00
	4200.00	0.00	179.65	4200.00	0.00	0.00	0.00	408953.70	757271.40	N 32 7 20.54	W 103 38 8.97	0.00	0.00	0.00
	4300.00	0.00	179.65	4300.00	0.00	0.00	0.00	408953.70	757271.40	N 32 7 20.54	W 103 38 8.97	0.00	0.00	0.00
	4400.00	0.00	179.65	4400.00	0.00	0.00	0.00	408953.70	757271.40	N 32 7 20.54	W 103 38 8.97	0.00	0.00	0.00
	4500.00	0.00	179.65	4500.00	0.00	0.00	0.00	408953.70	757271.40	N 32 7 20.54	W 103 38 8.97	0.00	0.00	0.00
	4600.00	0.00	179.65	4600.00	0.00	0.00	0.00	408953.70	757271.40	N 32 7 20.54	W 103 38 8.97	0.00	0.00	0.00
	4700.00	0.00	179.65	4700.00	0.00	0.00	0.00	408953.70	757271.40	N 32 7 20.54	W 103 38 8.97	0.00	0.00	0.00
	4800.00	0.00	179.65	4800.00	0.00	0.00	0.00	408953.70	757271.40	N 32 7 20.54	W 103 38 8.97	0.00	0.00	0.00
	4900.00	0.00	179.65	4900.00	0.00	0.00	0.00	408953.70	757271.40	N 32 7 20.54	W 103 38 8.97	0.00	0.00	0.00
	5000.00	0.00	179.65	5000.00	0.00	0.00	0.00	408953.70	757271.40	N 32 7 20.54	W 103 38 8.97	0.00	0.00	0.00
	5100.00	0.00	179.65	5100.00	0.00	0.00	0.00	408953.70	757271.40	N 32 7 20.54	W 103 38 8.97	0.00	0.00	0.00
	5200.00	0.00	179.65	5200.00	0.00	0.00	0.00	408953.70	757271.40	N 32 7 20.54	W 103 38 8.97	0.00	0.00	0.00
	5300.00	0.00	179.65	5300.00	0.00	0.00	0.00	408953.70	757271.40	N 32 7 20.54	W 103 38 8.97	0.00	0.00	0.00
	5400.00	0.00	179.65	5400.00	0.00	0.00	0.00	408953.70	757271.40	N 32 7 20.54	W 103 38 8.97	0.00	0.00	0.00
	5500.00	0.00	179.65	5500.00	0.00	0.00	0.00	408953.70	757271.40	N 32 7 20.54	W 103 38 8.97	0.00	0.00	0.00
	5600.00	0.00	179.65	5600.00	0.00	0.00	0.00	408953.70	757271.40	N 32 7 20.54	W 103 38 8.97	0.00	0.00	0.00
	5700.00	0.00	179.65	5700.00	0.00	0.00	0.00	408953.70	757271.40	N 32 7 20.54	W 103 38 8.97	0.00	0.00	0.00
	5800.00	0.00	179.65	5800.00	0.00	0.00	0.00	408953.70	757271.40	N 32 7 20.54	W 103 38 8.97	0.00	0.00	0.00
	5900.00	0.00	179.65	5900.00	0.00	0.00	0.00	408953.70	757271.40	N 32 7 20.54	W 103 38 8.97	0.00	0.00	0.00
	6000.00	0.00	179.65	6000.00	0.00	0.00	0.00	408953.70	757271.40	N 32 7 20.54	W 103 38 8.97	0.00	0.00	0.00
	6100.00	0.00	179.65	6100.00	0.00	0.00	0.00	408953.70	757271.40	N 32 7 20.54	W 103 38 8.97	0.00	0.00	0.00
	6200.00	0.00	179.65	6200.00	0.00	0.00	0.00	408953.70	757271.40	N 32 7 20.54	W 103 38 8.97	0.00	0.00	0.00
	6300.00	0.00	179.65	6300.00	0.00	0.00	0.00	408953.70	757271.40	N 32 7 20.54	W 103 38 8.97	0.00	0.00	0.00
	6400.00	0.00	179.65	6400.00	0.00	0.00	0.00	408953.70	757271.40	N 32 7 20.54	W 103 38 8.97	0.00	0.00	0.00
	6500.00	0.00	179.65	6500.00	0.00	0.00	0.00	408953.70	757271.40	N 32 7 20.54	W 103 38 8.97	0.00	0.00	0.00
	6600.00	0.00	179.65	6600.00	0.00	0.00	0.00	408953.70	757271.40	N 32 7 20.54	W 103 38 8.97	0.00	0.00	0.00
	6700.00	0.00	179.65	6700.00	0.00	0.00	0.00	408953.70	757271.40	N 32 7 20.54	W 103 38 8.97	0.00	0.00	0.00
	6800.00	0.00	179.65	6800.00	0.00	0.00	0.00	408953.70	757271.40	N 32 7 20.54	W 103 38 8.97	0.00	0.00	0.00
	6900.00	0.00	179.65	6900.00	0.00	0.00	0.00	408953.70	757271.40	N 32 7 20.54	W 103 38 8.97	0.00	0.00	0.00
	7000.00	0.00	179.65	7000.00	0.00	0.00	0.00	408953.70	757271.40	N 32 7 20.54	W 103 38 8.97	0.00	0.00	0.00
	7100.00	0.00	179.65	7100.00	0.00	0.00	0.00	408953.70	757271.40	N 32 7 20.54	W 103 38 8.97	0.00	0.00	0.00
	7200.00	0.00	179.65	7200.00	0.00	0.00	0.00	408953.70	757271.40	N 32 7 20.54	W 103 38 8.97	0.00	0.00	0.00
	7300.00	0.00	179.65	7300.00	0.00	0.00	0.00	408953.70	757271.40	N 32 7 20.54	W 103 38 8.97	0.00	0.00	0.00
	7400.00	0.00	179.65	7400.00	0.00	0.00	0.00	408953.70	757271.40	N 32 7 20.54	W 103 38 8.97	0.00	0.00	0.00
	7500.00	0.00	179.65	7500.00	0.00	0.00	0.00	408953.70	757271.40	N 32 7 20.54	W 103 38 8.97	0.00	0.00	0.00
	7600.00	0.00	179.65	7600.00	0.00	0.00	0.00	408953.70	757271.40	N 32 7 20.54	W 103 38 8.97	0.00	0.00	0.00
	7700.00	0.00	179.65	7700.00	0.00	0.00	0.00	408953.70	757271.40	N 32 7 20.54	W 103 38 8.97	0.00	0.00	0.00
	7800.00	0.00	179.65	7800.00	0.00	0.00	0.00	408953.70	757271.40	N 32 7 20.54	W 103 38 8.97	0.00	0.00	0.00
	7900.00	0.00	179.65	7900.00	0.00	0.00	0.00	408953.70	757271.40	N 32 7 20.54	W 103 38 8.97	0.00	0.00	0.00
	8000.00	0.00	179.65	8000.00	0.00	0.00	0.00	408953.70	757271.40	N 32 7 20.54	W 103 38 8.97	0.00	0.00	0.00
	8100.00	0.00	179.65	8100.00	0.00	0.00	0.00	408953.70	757271.40	N 32 7 20.54	W 103 38 8.97	0.00	0.00	0.00
	8200.00	0.00	179.65	8200.00	0.00	0.00	0.00	408953.70	757271.40	N 32 7 20.54	W 103 38 8.97	0.00	0.00	0.00
	8300.00	0.00	179.65	8300.00	0.00	0.00	0.00	408953.70	757271.40	N 32 7 20.54	W 103 38 8.97	0.00	0.00	0.00

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")	Closure (ft)	Closure Azimuth (°)	DLS (°/100ft)
	8400.00	0.00	179.65	8400.00	0.00	0.00	0.00	408953.70	757271.40	N 32 7 20.54	W 103 38 8.97	0.00	0.00	0.00
	8500.00	0.00	179.65	8500.00	0.00	0.00	0.00	408953.70	757271.40	N 32 7 20.54	W 103 38 8.97	0.00	0.00	0.00
	8600.00	0.00	179.65	8600.00	0.00	0.00	0.00	408953.70	757271.40	N 32 7 20.54	W 103 38 8.97	0.00	0.00	0.00
	8700.00	0.00	179.65	8700.00	0.00	0.00	0.00	408953.70	757271.40	N 32 7 20.54	W 103 38 8.97	0.00	0.00	0.00
	8800.00	0.00	179.65	8800.00	0.00	0.00	0.00	408953.70	757271.40	N 32 7 20.54	W 103 38 8.97	0.00	0.00	0.00
	8900.00	0.00	179.65	8900.00	0.00	0.00	0.00	408953.70	757271.40	N 32 7 20.54	W 103 38 8.97	0.00	0.00	0.00
	9000.00	0.00	179.65	9000.00	0.00	0.00	0.00	408953.70	757271.40	N 32 7 20.54	W 103 38 8.97	0.00	0.00	0.00
	9100.00	0.00	179.65	9100.00	0.00	0.00	0.00	408953.70	757271.40	N 32 7 20.54	W 103 38 8.97	0.00	0.00	0.00
	9200.00	0.00	179.65	9200.00	0.00	0.00	0.00	408953.70	757271.40	N 32 7 20.54	W 103 38 8.97	0.00	0.00	0.00
	9300.00	0.00	179.65	9300.00	0.00	0.00	0.00	408953.70	757271.40	N 32 7 20.54	W 103 38 8.97	0.00	0.00	0.00
	9400.00	0.00	179.65	9400.00	0.00	0.00	0.00	408953.70	757271.40	N 32 7 20.54	W 103 38 8.97	0.00	0.00	0.00
	9500.00	0.00	179.65	9500.00	0.00	0.00	0.00	408953.70	757271.40	N 32 7 20.54	W 103 38 8.97	0.00	0.00	0.00
	9600.00	0.00	179.65	9600.00	0.00	0.00	0.00	408953.70	757271.40	N 32 7 20.54	W 103 38 8.97	0.00	0.00	0.00
	9700.00	0.00	179.65	9700.00	0.00	0.00	0.00	408953.70	757271.40	N 32 7 20.54	W 103 38 8.97	0.00	0.00	0.00
	9800.00	0.00	179.65	9800.00	0.00	0.00	0.00	408953.70	757271.40	N 32 7 20.54	W 103 38 8.97	0.00	0.00	0.00
	9900.00	0.00	179.65	9900.00	0.00	0.00	0.00	408953.70	757271.40	N 32 7 20.54	W 103 38 8.97	0.00	0.00	0.00
	10000.00	0.00	179.65	10000.00	0.00	0.00	0.00	408953.70	757271.40	N 32 7 20.54	W 103 38 8.97	0.00	0.00	0.00
	10100.00	0.00	179.65	10100.00	0.00	0.00	0.00	408953.70	757271.40	N 32 7 20.54	W 103 38 8.97	0.00	0.00	0.00
	10200.00	0.00	179.65	10200.00	0.00	0.00	0.00	408953.70	757271.40	N 32 7 20.54	W 103 38 8.97	0.00	0.00	0.00
	10300.00	0.00	179.65	10300.00	0.00	0.00	0.00	408953.70	757271.40	N 32 7 20.54	W 103 38 8.97	0.00	0.00	0.00
KOP - Build @ 12°/100' DLS	10400.00	0.00	179.65	10400.00	0.00	0.00	0.00	408953.70	757271.40	N 32 7 20.54	W 103 38 8.97	0.00	0.00	0.00
	10500.00	11.99	179.65	10499.27	10.42	-10.42	0.06	408943.28	757271.46	N 32 7 20.43	W 103 38 8.97	10.42	179.65	11.99
	10600.00	23.97	179.65	10594.22	41.23	-41.23	0.25	408912.47	757271.65	N 32 7 20.13	W 103 38 8.97	41.23	179.65	11.99
	10700.00	35.96	179.65	10680.69	91.09	-91.09	0.55	408862.62	757271.95	N 32 7 19.64	W 103 38 8.97	91.09	179.65	11.99
	10800.00	47.94	179.65	10754.93	157.82	-157.81	0.96	408795.89	757272.36	N 32 7 18.98	W 103 38 8.97	157.82	179.65	11.99
	10900.00	59.93	179.65	10813.69	238.51	-238.50	1.44	408715.21	757272.84	N 32 7 18.18	W 103 38 8.97	238.51	179.65	11.99
	11000.00	71.92	179.65	10854.41	329.64	-329.63	2.00	408624.08	757273.40	N 32 7 17.28	W 103 38 8.97	329.64	179.65	11.99
	11100.00	83.90	179.65	10875.32	427.24	-427.23	2.59	408526.48	757273.99	N 32 7 16.31	W 103 38 8.97	427.24	179.65	11.99
Landing Point	11146.29	89.45	179.65	10878.00	473.43	-473.42	2.87	408480.29	757274.27	N 32 7 15.85	W 103 38 8.97	473.43	179.65	11.99
	11200.00	89.45	179.65	10878.52	527.14	-527.13	3.19	408426.59	757274.59	N 32 7 15.32	W 103 38 8.97	527.14	179.65	0.00
	11300.00	89.45	179.65	10879.48	627.14	-627.13	3.80	408326.60	757275.20	N 32 7 14.33	W 103 38 8.97	627.14	179.65	0.00
	11400.00	89.45	179.65	10880.44	727.14	-727.12	4.40	408226.61	757275.80	N 32 7 13.34	W 103 38 8.97	727.14	179.65	0.00
	11500.00	89.45	179.65	10881.40	827.13	-827.12	5.01	408126.62	757276.41	N 32 7 12.35	W 103 38 8.97	827.13	179.65	0.00
	11600.00	89.45	179.65	10882.36	927.13	-927.11	5.62	408026.63	757277.01	N 32 7 11.36	W 103 38 8.97	927.13	179.65	0.00
	11700.00	89.45	179.65	10883.32	1027.12	-1027.10	6.22	407926.64	757277.62	N 32 7 10.37	W 103 38 8.98	1027.12	179.65	0.00
	11800.00	89.45	179.65	10884.28	1127.12	-1127.10	6.83	407826.65	757278.23	N 32 7 9.38	W 103 38 8.98	1127.12	179.65	0.00
	11900.00	89.45	179.65	10885.24	1227.11	-1227.09	7.43	407726.66	757278.83	N 32 7 8.39	W 103 38 8.98	1227.11	179.65	0.00
	12000.00	89.45	179.65	10886.20	1327.11	-1327.08	8.04	407626.67	757279.44	N 32 7 7.41	W 103 38 8.98	1327.11	179.65	0.00
	12100.00	89.45	179.65	10887.16	1427.10	-1427.08	8.64	407526.68	757280.04	N 32 7 6.42	W 103 38 8.98	1427.10	179.65	0.00
	12200.00	89.45	179.65	10888.13	1527.10	-1527.07	9.25	407426.69	757280.65	N 32 7 5.43	W 103 38 8.98	1527.10	179.65	0.00
	12300.00	89.45	179.65	10889.09	1627.09	-1627.06	9.85	407326.70	757281.25	N 32 7 4.44	W 103 38 8.98	1627.09	179.65	0.00
	12400.00	89.45	179.65	10890.05	1727.09	-1727.06	10.46	407226.71	757281.86	N 32 7 3.45	W 103 38 8.98	1727.09	179.65	0.00
	12500.00	89.45	179.65	10891.01	1827.08	-1827.05	11.07	407126.72	757282.47	N 32 7 2.46	W 103 38 8.98	1827.08	179.65	0.00
	12600.00	89.45	179.65	10891.98	1927.08	-1927.04	11.67	407026.73	757283.07	N 32 7 1.47	W 103 38 8.98	1927.08	179.65	0.00
	12700.00	89.45	179.65	10892.94	2027.08	-2027.04	12.28	406926.74	757283.68	N 32 7 0.48	W 103 38 8.98	2027.08	179.65	0.00
	12800.00	89.45	179.65	10893.90	2127.07	-2127.03	12.88	406826.75	757284.28	N 32 6 59.49	W 103 38 8.98	2127.07	179.65	0.00
	12900.00	89.45	179.65	10894.87	2227.07	-2227.02	13.49	406726.76	757284.89	N 32 6 58.50	W 103 38 8.98	2227.07	179.65	0.00
	13000.00	89.45	179.65	10895.83	2327.06	-2327.02	14.09	406626.77	757285.49	N 32 6 57.51	W 103 38 8.98	2327.06	179.65	0.00
	13100.00	89.45	179.65	10896.79	2427.06	-2427.01	14.70	406526.78	757286.10	N 32 6 56.52	W 103 38 8.98	2427.06	179.65	0.00
	13200.00	89.45	179.65	10897.76	2527.05	-2527.01	15.31	406426.79	757286.71	N 32 6 55.53	W 103 38 8.98	2527.05	179.65	0.00
	13300.00	89.45	179.65	10898.72	2627.05	-2627.00	15.91	406326.80	757287.31	N 32 6 54.54	W 103 38 8.98	2627.05	179.65	0.00
	13400.00	89.45	179.65	10899.68	2727.04	-2726.99	16.52	406226.82	757287.92	N 32 6 53.55	W 103 38 8.98	2727.04	179.65	0.00
	13500.00	89.45	179.65	10900.65	2827.04	-2826.99	17.12	406126.83	757288.52	N 32 6 52.56	W 103 38 8.98	2827.04	179.65	0.00
	13600.00	89.45	179.65	10901.61	2927.03	-2926.98	17.73	406026.84	757289.13	N 32 6 51.57	W 103 38 8.98	2927.03	179.65	0.00

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")	Closure (ft)	Closure Azimuth (°)	DLS (°/100ft)
	13700.00	89.45	179.65	10902.58	3027.03	-3026.97	18.34	405926.85	757289.73	N 32 6 50.58	W 103 38 8.98	3027.03	179.65	0.00
	13800.00	89.45	179.65	10903.54	3127.02	-3126.97	18.94	405826.86	757290.34	N 32 6 49.59	W 103 38 8.99	3127.02	179.65	0.00
	13900.00	89.45	179.65	10904.51	3227.02	-3226.96	19.55	405726.87	757290.95	N 32 6 48.60	W 103 38 8.99	3227.02	179.65	0.00
	14000.00	89.45	179.65	10905.48	3327.01	-3326.95	20.15	405626.88	757291.55	N 32 6 47.62	W 103 38 8.99	3327.01	179.65	0.00
	14100.00	89.45	179.65	10906.44	3427.01	-3426.95	20.76	405526.89	757292.16	N 32 6 46.63	W 103 38 8.99	3427.01	179.65	0.00
	14200.00	89.45	179.65	10907.41	3527.01	-3526.94	21.36	405426.90	757292.76	N 32 6 45.64	W 103 38 8.99	3527.01	179.65	0.00
	14300.00	89.45	179.65	10908.37	3627.00	-3626.93	21.97	405326.91	757293.37	N 32 6 44.65	W 103 38 8.99	3627.00	179.65	0.00
	14400.00	89.45	179.65	10909.34	3727.00	-3726.93	22.58	405226.92	757293.98	N 32 6 43.66	W 103 38 8.99	3727.00	179.65	0.00
	14500.00	89.45	179.65	10910.31	3826.99	-3826.92	23.18	405126.93	757294.58	N 32 6 42.67	W 103 38 8.99	3826.99	179.65	0.00
	14600.00	89.45	179.65	10911.27	3926.99	-3926.91	23.79	405026.94	757295.19	N 32 6 41.68	W 103 38 8.99	3926.99	179.65	0.00
	14700.00	89.45	179.65	10912.24	4026.98	-4026.91	24.39	404926.95	757295.79	N 32 6 40.69	W 103 38 8.99	4026.98	179.65	0.00
	14800.00	89.45	179.65	10913.21	4126.98	-4126.90	25.00	404826.96	757296.40	N 32 6 39.70	W 103 38 8.99	4126.98	179.65	0.00
	14900.00	89.45	179.65	10914.17	4226.97	-4226.89	25.61	404726.97	757297.00	N 32 6 38.71	W 103 38 8.99	4226.97	179.65	0.00
	15000.00	89.45	179.65	10915.14	4326.97	-4326.89	26.21	404626.98	757297.61	N 32 6 37.72	W 103 38 8.99	4326.97	179.65	0.00
	15100.00	89.45	179.65	10916.11	4426.96	-4426.88	26.82	404526.99	757298.22	N 32 6 36.73	W 103 38 8.99	4426.96	179.65	0.00
	15200.00	89.45	179.65	10917.08	4526.96	-4526.88	27.42	404427.00	757298.82	N 32 6 35.74	W 103 38 8.99	4526.96	179.65	0.00
Cimarex Fuggles 24 Federal #1H PBHL	15295.31	89.45	179.65	10918.00	4622.27	-4622.18	28.00	404331.70	757299.40	N 32 6 34.80	W 103 38 8.99	4622.27	179.65	0.00

Survey Type: *Non-Def Plan*

Survey Error Model: ISCWSA Rev 0 *** 3-D 95.000% Confidence 2.7955 sigma
Survey Program:

Description	MD From (ft)	MD To (ft)	EOU Freq (ft)	Hole Size (in)	Casing Diameter (in)	Survey Tool Type	Borehole / Survey
	0.000	15295.313	1/100.000	30.000	30.000	SLB_MWD-STD	Original Borehole / Cimarex Fuggles 24 Federal #1H Rev0

SR & A

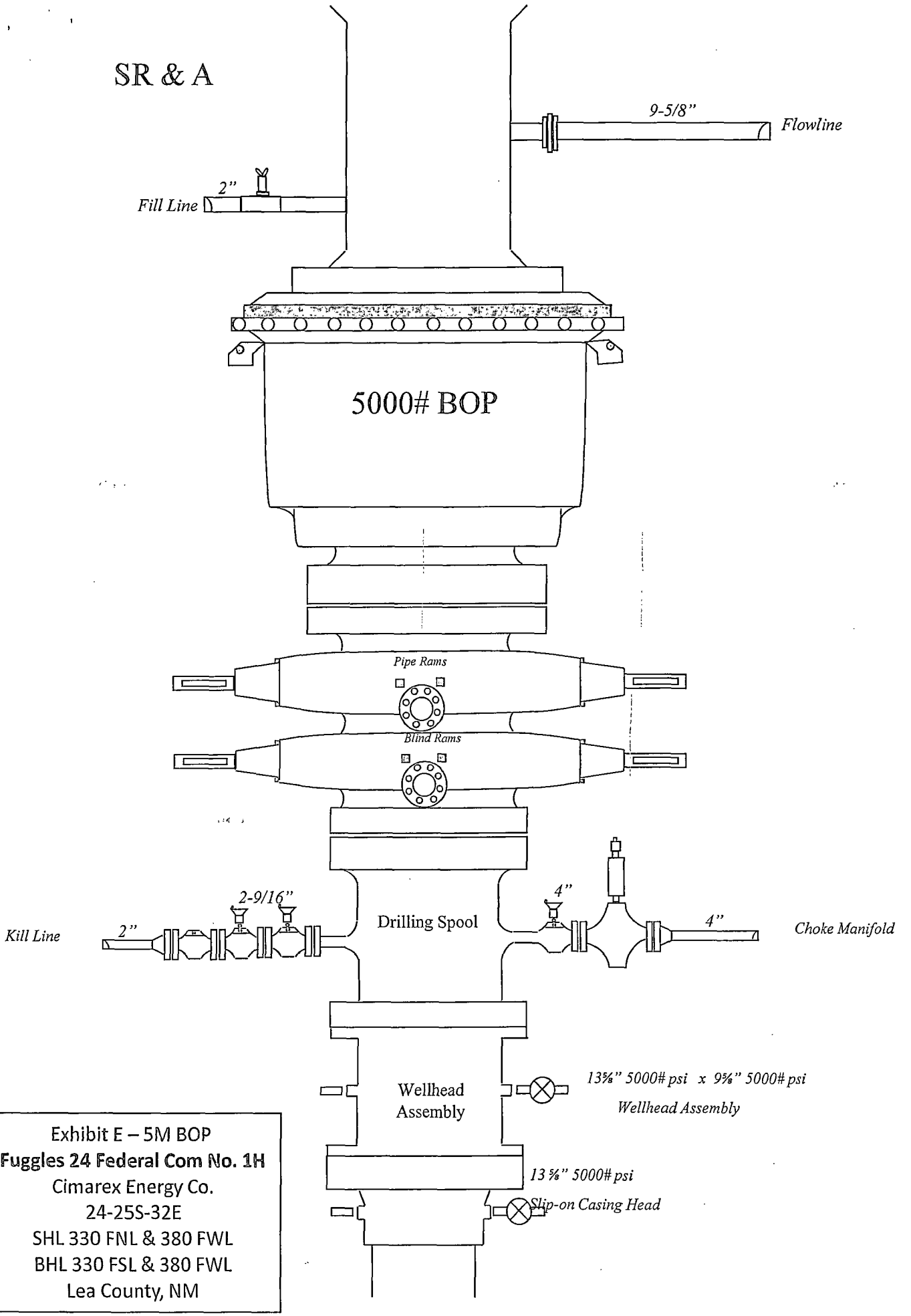
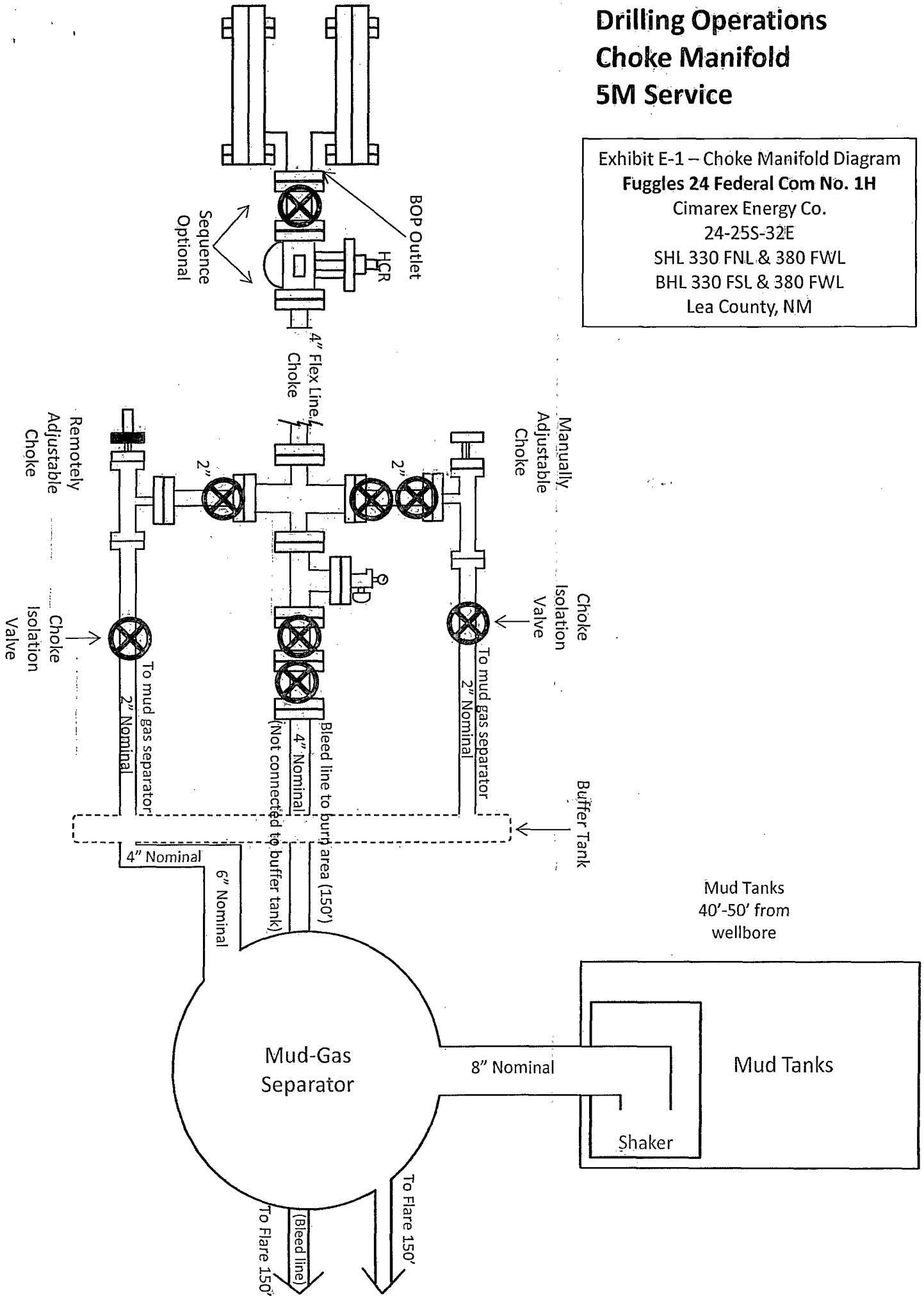
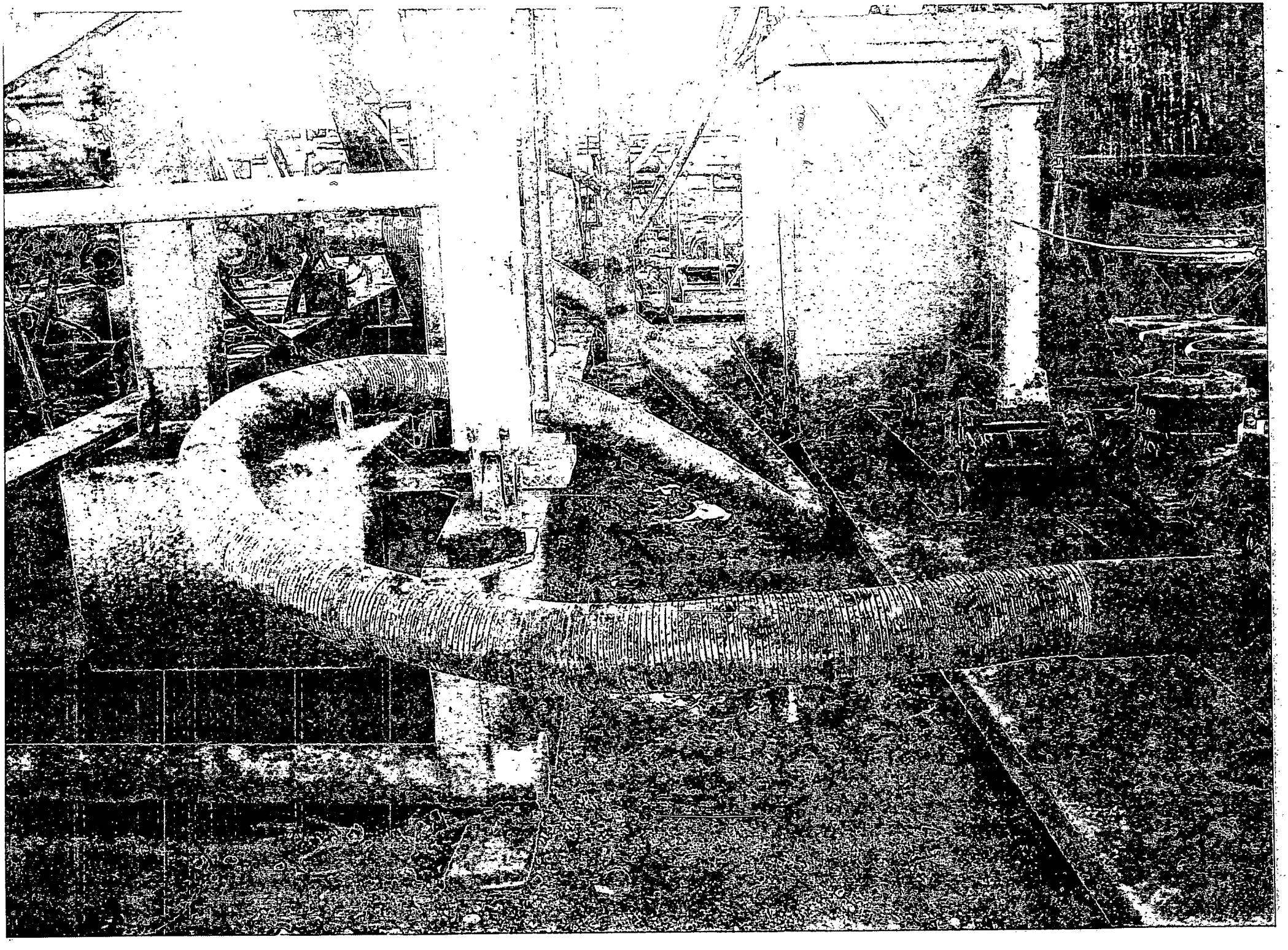


Exhibit E – 5M BOP
Fuggles 24 Federal Com No. 1H
Cimarex Energy Co.
24-25S-32E
SHL 330 FNL & 380 FWL
BHL 330 FSL & 380 FWL
Lea County, NM

Drilling Operations
Choke Manifold
5M Service

Exhibit E-1 – Choke Manifold Diagram
Fuggles 24 Federal Com No. 1H
Cimarex Energy Co.
24-25S-32E
SHL 330 FNL & 380 FWL
BHL 330 FSL & 380 FWL
Lea County, NM





MIDWEST

HOSE AND SPECIALTY INC.

INTERNAL HYDROSTATIC TEST REPORT

Customer:	P.O. Number:
CACTUS	Rig#101
	Asset#M5358

HOSE SPECIFICATIONS

Type:	CHOKE LINE		Length:	35'
I.D.	4" *INCHES*		O.D.	8" *INCHES*

WORKING PRESSURE	TEST PRESSURE	BURST PRESSURE
10,000 *PSI*	15,000 *PSI*	*PSI*

COUPLINGS

Type of End Fitting
4 1/16 10K FLANGE

Type of Coupling:	MANUFACTURED BY
SWEDGED	MIDWEST HOSE & SPECIALTY

PROCEDURE

Hose assembly pressure tested with water at ambient temperature.

TIME HELD AT TEST PRESSURE	ACTUAL BURST PRESSURE:
15 *MIN.*	0 *PSI*

COMMENTS:
s/n#59473 Asset#M5358
Hose is covered with stainless steel armour cover and wraped with fire resistant vermiculite coated fiberglass insulation rated for 1500 degrees complete with lifting eyes

Date:	Tested By:	Approved:
5/19/2010	BOBBY FINK	MENDI JACKSON

CACTUS DRILLING COMPANY, L.L.C.

September 21, 2012

To whom it may concern,

Prior to December 2011, Midwest Hose did not provide test charts with any of the hoses that were sold. They have subsequently received the proper certification for API and now provide test charts for all hoses purchased: choke hoses, vibrating hoses and Kelly hoses.

The hose products we purchase from them today are the exact same product and specifications as in the past but anything purchased prior to December 2011 will not have a test chart available.

Please let us know if further assistance is needed.

Sincerely,

Greg Hudson
Project Manager
Cactus Drilling Company, L.L.C.

8300 S.W. 15th • Oklahoma City, OK 73128
(405) 577-5347 • Fax (405) 577-9306

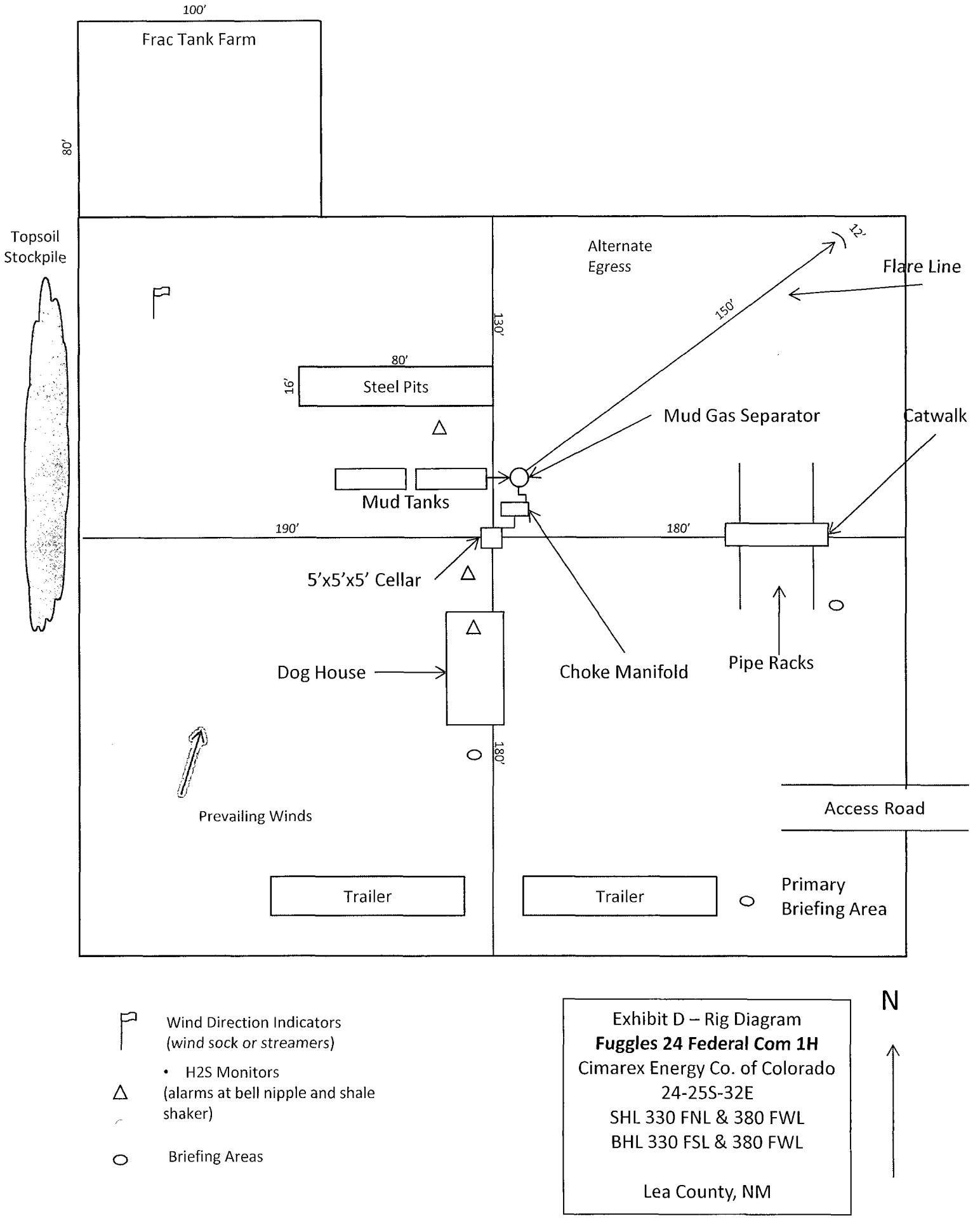


Exhibit D – Rig Diagram
Fuggles 24 Federal Com 1H
Cimarex Energy Co. of Colorado
24-25S-32E
SHL 330 FNL & 380 FWL
BHL 330 FSL & 380 FWL

Lea County, NM